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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,704	05/14/2001	Young Jun Kim	2598/OJ346	8854

7590 06/30/2005

DARBY & DARBY P.C.
805 Third Avenue
New York, NY 10022

EXAMINER

MISLEH, JUSTIN P

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/854,704

Applicant(s)

KIM ET AL.

Examiner

Justin P. Misleh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,5 and 6 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 3 February 2005 have been fully considered but they are not persuasive. However, the Examiner accepts Applicant's amendments to the specification, abstract, and drawings. There are no further objections to the disclosure.

2. Applicant argues, "While control circuit 43 may not actively drive the motor 48 for the image sensor once focus has been established, there is no 'movement limiting means', which prevents movement."

3. The Examiner disagrees with Applicant's position. The Examiner relied upon the Points 1, 2, and 3 of figure 4 (Ohtake) to teach a first transferring area defining portion since Points 1, 2, and 3 represent "three click stop positions" on the optical axis upon which the front lens section (30) including the focus lens (62) is movable (see column 3, lines 61 – 63). Furthermore, the Examiner stated (Non-Final Office Action; 20 July 2004), "the second transferring area for defining the transferring area of the image sensor is defined when the focus lens is not further transferred." Ohtake supports the Examiner's assertion in column 5 (lines 45 – 64), by noting that the image pickup device (34) is only transferred after the focus lens (62) has been transferred to a position (P1, P2, and P3) within the first transferring area defining portion. Thus, Applicant's are traversed, the control unit (43) is in fact a "movement limiting means" since it limits movement of the image pickup device (34) until after the focus lens (62) has been transferred and not during the transferring.

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4. Applicant further argues, “the definition of ‘integral’ is ‘formed as a unit with another part’” and “clearly the motor 40 of Ernest is not formed as a unit with sensor 20.”

5. The Examiner disagrees with Applicant’s position. Figure 4 of Ernest clearly shows how the wear plate (72), lead screw (68), gear (70), and motor (40) are attached to and are an essential component of the image sensor (20). Thus, Applicant’s arguments are traversed, frame (56) is a clear indication that everything within thereof including the wear plate (72), lead screw (68), gear (70), and motor (40) together with the image sensor (20) are formed as a single unit.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claim 1** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtake in view of Ernest et al.

8. For **Claim 1**, Ohtake discloses, as shown in figures 2 – 4 and as stated in columns 2 (lines 25 – 34 and 54 – 59), 3 (lines 5 – 25 and 54 – 63), 4 (lines 52 – 59), and 5 (lines 9 – 49), a micro mode executing apparatus for a digital still camera, the apparatus comprising: a focus lens (imaging lens section figure 2 – 32 / figure 4 – 62) and an image sensor (34) arranged sequentially with an optical axis passing through centers of the lens and the sensor (see figures 2 and 4); transferring means (drive motors 48 and 68) for moving both the focus lens (see figure 4) and the image sensor along the optical axis (along $X \leftrightarrow Y$); a first transferring area defining

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portion for defining a movement area of the focus lens (62) when moved by the transferring means (P1, P2 and P3); a second transferring area defining portion for defining a movement area image sensor when moved horizontally along the optical axis by the transferring means, and when the focus lens is blocked from further movement by the first transferring area defining portion (see explanation below); and transferring movement limiting means for preventing the image sensor from moving when the focus lens is transferred in an area defined by the first transferring area defining portion according to the operation of the transferring means (control unit 43).

As stated in column 5 (lines 9 – 49), the image sensor is transferred along the optical axis to an in focus position, according to the data table shown in figure 3. The image sensor is transferred in response to the transferring of the focusing lens along the optical axis. Together, the focusing lens and the image sensor produce an in-focus image. The transferring of the image sensor is dependent upon the transferred position (as detected by the position sensor 69) of the focusing lens, thus, the second transferring area for defining the transferring area of the image sensor is defined when the focus lens is not further transferred and the image sensor is prevented from transferring when the focus lens is transferred

However, Ohtake does not disclose wherein the transferring means is provided integrally on the image sensor. On the other hand, Ernest et al. also disclose a transferring in a digital camera. More specifically, Ernest et al. disclose as shown in figures 4 and 5, transferring means (motor 40 and gears 68 and 70) provided integrally on the image sensor (20). As stated in column 1 (lines 35- 38), at the time the invention was made, one with ordinary skill in the art would have been motivated to include transferring means provided integrally on the image

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sensor, as taught by Ernest et al., in the digital camera, disclosed by Ohtake, as a means to provide a digital camera that works well with statically mounted lenses while optimizing image focus. Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included transferring means provided integrally on the image sensor, as taught by Ernest et al., in the digital camera, disclosed by Ohtake.

Allowable Subject Matter

9. **Claims 3 and 4** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. **Claim 2** is allowed.

The following is a statement of reasons for the indication of allowable subject matter: While the closest prior art (see the cited prior art of form PTO-892) discloses an image sensor and a focusing lens transferred along an optical axis, the prior art does not teach or fairly suggest a motor transferred along a rotating axis of a spindle with a rotating direction of the motor being changed in line with an applied electrical signal with reference to the rotating axis of the spindle; an image sensor, mounted integrally onto one side of the motor through a fixing member, for converting an image of an object to be photographed to an electrical signal; and a focus lens positioned on a same optical axis as the image sensor and secured to one end of the rotating axis of the spindle.

Cited Prior Art

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following is a brief description of the cited prior art as identified on form PTO-892:

- **Prior Art A** discloses, in the very least, transferring means for transferring an image sensor in and out of an optical path and a focus lens along an optical axis wherein when the focus lens is fixed, the transferring means transfers only the image sensor to protect the image sensor.
- **Prior Art B and D** discloses, in the very least, transferring means for transferring a focus lens along an optical axis wherein the transferring is biased by a spring and a stepped cam shaft of the lens barrel housing.
- **Prior Art C** discloses, in the very least, a lens barrel comprising an image sensor and a series of zooming and focusing lens wherein the image sensor is provided integrally with transferring means for transferring the zooming and the focusing lenses.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

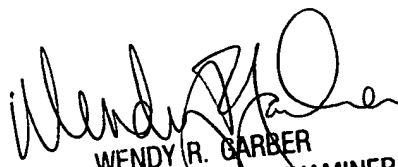
13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 5:00 PM and on alternating Fridays from 8:00 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wendy R Garber can be reached on 571.272.7308. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM

June 20, 2005


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600